

**REMARKS**

**Interview Statement:**

Applicants appreciate the Examiner's courtesy in granting the telephone interview of March 3, 2009 with the undersigned.

With regard to the rejections based on Lupton and Hasegawa, an amendment to Claim 1 to recite a specific surface area of 4 to 15 m<sup>2</sup>/g was proposed. However, it was the Examiner's position that Claim 1, as written, is unclear as to whether Applicants are claiming a calcined powder. The Examiner indicated that if the phrase "when measured after calcination at 1,100°C" was canceled from Claim 1, an amendment setting the lower limit to 4 would possibly overcome the rejections based on Lupton and Hasegawa.

Alternatively and in addition, the Examiner suggested further amending Claim 1 to recite "A calcined indium oxide-tin oxide powder comprising..." In this regard, the Examiner noted that none of Lupton, Hasegawa or Iwamoto appears to disclose a calcined powder.

With regard to the rejections based on Lee and Iwamoto, arguments were presented that the presently claimed powder is structurally different from the powders of Lee and Iwamoto. In particular, it was argued that the wet synthesis method of Lee and Iwamoto produces structurally different powders than those produced by the dry-synthesis method of the present invention. In support thereof, Applicants' representative pointed to Comparative Examples 1 and 2 of the specification. The Examiner indicated that he would have to study the Comparative Examples of the specification to see whether they are close enough to the synthesis methods of Lee and Iwamoto to allow him to conclude that the wet process working examples of Lee and Iwamoto would not meet a solid solution amount of 2.3 mass% or more as required by claim 1.

Furthermore, sintering of a compression-molded body (see Iwamoto at col. 8, lines 47-50) was discussed. It was the Examiner's view that the subject disclosure in Iwamoto is not that of a calcined powder. In addition, Lee's disclosure of an indium/tin hydroxide powder different from the claimed indium oxide-tin oxide powder (see Lee at col. 6, lines 39-41) was discussed. The Examiner's view was that calcining the powder at 600°C, as disclosed in Lee, would typically remove the water, and therefore, a hydroxide-containing powder would not be possible.

**Claim Amendments:**

Claim 1 has been amended so as to be directed to a calcined indium oxide-tin oxide powder, and to limit the specific surface area of the calcined indium oxide- tin oxide powder from 4 to 15 m<sup>2</sup>/g. Support for the lower limit of 4 m<sup>2</sup>/g is found, for example, by reference to Production Example 3 in paragraph [0084] at page 34 of the specification. The specific surface area reported in paragraph [0084] is that of the calcined powder. Accordingly, claim 9 has been canceled.

The Abstract has been amended to combine the separate paragraphs into one, in response to the objection to the Specification.

Entry of the amendments and review and reconsideration on the merits are requested.

Claims 1-6 and 8 were rejected under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 6,030,507 to Lupton.

Claims 1-6 and 8 were rejected under 35 U.S.C. § 102(a or e) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 6,500,225 to Hasegawa et al.

Claims 1-6, 8 and 9 were rejected under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over U.S. Patent No. 5,866,493 to Lee et al.

Claims 1-6, 8 and 9 were rejected under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 5,071,800 to Iwamoto et al.

Applicants traverse, and respectfully request the Examiner to reconsider in view of the amendment to the claims and the following remarks.

**Patentability of Amended Claim 1:**

As claimed in amended claim 1, the calcined indium oxide-tin oxide powder has a specific surface area from 4 to 15 m<sup>2</sup>/g. This characteristic feature of the invention is not taught, suggested or otherwise disclosed by any of the cited prior art.

In more detail, Lupton discloses that “[a]dvantageously, the ITO powder has a specific surface area according to the Brunauer-Emmett-Teller (BET) method of at most 3 m<sup>2</sup>/g.” *See*, col. 4, lines 34-37.

Lupton does not disclose a calcined indium oxide-tin oxide powder, let alone a calcined indium oxide-tin oxide having the specific surface area of from 4 to 15 m<sup>2</sup>/g as required by amended claim 1.

Similarly, Hasegawa fails to disclose or suggest an ITO having the claimed specific surface area of from 4 to 15 m<sup>2</sup>/g. *See*, for example, Working Example 1 of Hasegawa which discloses an oxide powder consisting of indium, tin and oxygen having a BET specific surface area of 3.26 m<sup>2</sup>/g. Further, like Lupton, Hasegawa also fails to disclose a calcined indium oxide-tin oxide powder.

Iwamoto also fails to disclose a calcined powder. Further, Iwamoto employed a wet synthesis method which typically does not provide a product having a solid solution amount of 2.3 mass % or more as required by present claim 1. This is seen from a comparison of Examples

1 and 2 of the invention (dry-synthesis method) with Comparative Examples 1 and 2 (wet-synthesis method). As described at page 28 of the specification and shown in Table 1 at page 29, the ITO powders of Examples 1 and 2 were found to have a SnO<sub>2</sub> solid solution content of 2.35 wt. % and 2.42 wt. %, higher than the SnO<sub>2</sub> solid solution content of 2.26 wt. % of the ITO powder of Comparative Example 2 obtained through wet synthesis.

Example 1 of Lee discloses a calcined powder having a BET surface area of 57 m<sup>2</sup>/g outside the scope of present claim 1 (column 8, lines 27-30). Further, Comparative Example 2 of the specification corresponding to Example 1 of Lee shows that the calcined powder thus obtained is not expected to have a solid solution amount of 2.3 mass % or more as required by present claim 1. The powders of Lee and Comparative Example 2 were both made using a wet-synthesis method, and both were calcined at 600°C. The mixing ratio of [In]/[Sn]=10 as employed in Example 1 of Lee is about the same as the mixing ratio used in Comparative Example 2 (where 20 g of In (4N) was mixed with 2.12 g of Sn (4N)).

For the above reasons, it is respectfully submitted that the amended claims are neither anticipated nor obvious any of Lupton, Hasegawa, Iwamoto and Lee, and withdrawal of the foregoing rejections is respectfully requested.

Withdrawal of all rejections and allowance of claims 1-6 and 8 is earnestly solicited.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

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Respectfully submitted,



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